

In the claims:

For the Examiner's convenience, all pending claims are presented below with changes shown in. Please cancel claims 3 and 12-14.

1 1. (Currently Amended) A processing element comprising:
2 an instruction buffer;
3 a first most often (MO) buffer coupled to the instruction buffer; ~~and~~
4 an execution unit coupled to the instruction buffer ~~and the first MO buffer~~,
5 ~~wherein the execution unit is adaptable to execute instructions stored within the first MO~~
6 ~~buffer based upon a first predetermined profile; and~~
7 a decode module, coupled to the instruction buffer, the first MO buffer, and the
8 execution unit, to decode an instruction to determine whether the instruction is to be
9 stored in the first MO buffer.

1 2. (Currently Amended) The processing element of claim 1 further comprising a
2 second MO buffer coupled to the instruction buffer and the decode module, execution
3 ~~unit, wherein the execution unit is adaptable to execute~~ instructions stored within the
4 second MO buffer based upon a second predetermined profile.

1 3. (Cancelled)

1 4. (Currently Amended) The processing element of claim 2 3 wherein the decode
2 module decodes an instruction to determine determines whether ~~an~~ the instruction is to be
3 stored in the first MO buffer or the second MO buffer ~~upon decoding the instruction~~.

1 5. (Currently Amended) The processing element of claim 4 further comprising:
2 a first profile buffer coupled to the first MO buffer, ~~wherein the first profile buffer~~
3 ~~stores to store~~ the first predetermined profile; and
4 a second profile buffer coupled to the second MO buffer, ~~wherein the first profile~~

5 ~~buffer stores to store~~ the second predetermined profile.

1 6. (Original) The processing element of claim 5 wherein the first and second
2 predetermined profiles each include a plurality of profile bits, each profile bit indicating
3 whether a corresponding instruction is to be executed at the execution unit during a
4 particular instruction fetch cycle.

1 7. (Original) The processing element of claim 6 further comprising:
2 a first profile pointer coupled to the first profile buffer; and
3 a second profile pointer coupled to the second profile buffer.

1 8. (Original) The processing element of claim 7 wherein the first profile pointer
2 points to a first profile bit of the first predetermined profile during a first instruction fetch
3 cycle.

1 9. (Original) The processing element of claim 8 wherein an instruction stored in
2 the first MO buffer is executed at the execution unit during the first instruction fetch
3 cycle if the first profile bit is active.

1 10. (Original) The processing element of claim 8 wherein an instruction stored in
2 the instruction buffer is executed at the execution unit during the first instruction fetch
3 cycle if the first profile bit is inactive.

1 11. (Currently Amended) A digital signal processor (DSP) comprising:
2 a plurality of processing elements, wherein each of the processing elements
3 comprises:
4 an instruction buffer;
5 a first most often (MO) buffer coupled to the instruction buffer; ~~and~~
6 a second most often (MO) buffer coupled to the instruction buffer;
7 an execution unit coupled to the instruction buffer ~~and the first MO buffer~~,

8 wherein the execution unit is adaptable to execute instructions stored within the
9 first MO buffer based upon a first predetermined profile and to execute
10 instructions stored within the second MO buffer based upon a second
11 predetermined profile; and

12 a decode module, coupled to the instruction buffer, the first MO buffer,
13 the second MO buffer and the execution unit, to decode an instruction to
14 determine whether the instruction is to be stored in the first MO buffer or the
15 second MO buffer.

1 12. (Cancelled)

1 13. (Cancelled)

1 14. (Cancelled)

1 15. (Currently Amended) The DSP of claim 11 14 wherein each processing element
2 further comprises:

3 a first profile buffer coupled to the first MO buffer, ~~wherein the first profile buffer~~
4 ~~stores to store~~ the first predetermined profile; and
5 a second profile buffer coupled to the second MO buffer, ~~wherein the first profile~~
6 ~~buffer stores to store~~ the second predetermined profile.

1 16. (Currently Amended) The DSP of claim 12 5 wherein the first and second
2 predetermined profiles each include a plurality of profile bits, each profile bit indicating
3 whether a corresponding instruction is to be executed at the execution unit during a
4 particular instruction fetch cycle.

1 17. (Original) The DSP of claim 16 wherein each processing element further
2 comprises:

3 a first profile pointer coupled to the first profile buffer; and

4 a second profile pointer coupled to the second profile buffer.

1 18. (Original) The DSP of claim 17 wherein the first profile pointer points to a
2 first profile bit of the first predetermined profile during a first instruction fetch cycle.

1 19. (Currently Amended) A method comprising:
2 receiving a first instruction at an instruction buffer;
3 examining a bit within determining whether the first instruction has been
4 designated to determine whether the first instruction is to be retrieved from a first buffer
5 ~~in order to be executed~~; and
6 ~~if so~~, retrieving the first instruction from the first buffer if the bit indicates that the
7 first instruction is to be retrieved from the first buffer;
8 otherwise, retrieving the buffer from a second buffer.

1 20. (Original) The method of claim 19 further comprising executing the first
2 instruction after it has been retrieved from the first buffer.

1 21. (Currently Amended) The method of claim 19 further comprising:
2 examining the bit within determining whether the first instruction has been
3 designated to determine if the first instruction is to be stored in the first buffer if the first
4 instruction has not been designated to be retrieved from the first buffer ~~in order to be~~
5 ~~executed~~;
6 ~~if so~~, storing the first instruction in the first buffer; and
7 ~~executing the first instruction from the instruction buffer after it has been~~
8 ~~retrieved from the second buffer~~.

1 22. (Currently Amended) The method of claim 21 further comprising:
2 determining whether the first instruction includes a command to load a profile if
3 the first instruction has not been designated to be stored in the first buffer;

4 if so, loading the profile in a third buffer if the first instruction has not been
5 designated to be stored in the first buffer; and
6 executing the first instruction after it has been retrieved from the first buffer.

1 23. (Original) The method of claim 22 further comprising executing the first
2 instruction after it has been retrieved from the second buffer if it is determined that the
3 first instruction does not include a command to load a profile if the first instruction has
4 not been designated to be stored in the first buffer.

1 24. (Currently Amended) An article of manufacture including one or more computer
2 readable media that embody a program of instructions, wherein the program of
3 instructions, when executed by a processing unit, causes the processing unit to:

4 receive a first instruction at an instruction buffer;
5 examine a bit within determine whether the first instruction has been designated
6 to determine whether the first instruction is to be retrieved from a first buffer in order to
7 be executed; and

8 if so, retrieve the first instruction from the first buffer if the bit indicates that the
9 first instruction is to be retrieved from the first buffer;
10 otherwise, retrieve the buffer from a second buffer.

1 25. (Original) The method of claim 24 wherein the program of instructions, when
2 executed by a processing unit, further causes the processing unit to execute the first
3 instruction after it has been retrieved from the first buffer.

1 26. (Currently Amended) The method of claim 24 wherein the program of
2 instructions, when executed by a processing unit, further causes the processing unit to:
3 examine the bit within determine whether the first instruction has been designated
4 to determine if the first instruction is to be stored in the first buffer if the first instruction
5 has not been designated to be retrieved from the first buffer in order to be executed;

6 if so, store the first instruction in the first buffer; and
7 execute the first instruction from the instruction buffer after it has been retrieved
8 from the second buffer.

1 27. (Currently Amended) The method of claim 26 wherein the program of
2 instructions, when executed by a processing unit, further causes the processing unit to:
3 determine whether the first instruction includes a command to a load a profile if
4 the first instruction has not been designated to be stored in the first buffer;
5 if so, load the profile in a third buffer if the first instruction has not been
6 designated to be stored in the first buffer; and
7 execute the first instruction after it has been retrieved from the first buffer.

1 28. (Original) The method of claim 27 wherein the program of instructions, when
2 executed by a processing unit, further causes the processing unit to execute the first
3 instruction after it has been retrieved from the second buffer if it is determined that the
4 first instruction does not include a command to a load a profile if the first instruction has
5 not been designated to be stored in the first buffer.